



Company Introduction

KVG Quartz Crystal Technology GmbH

KVG 石英晶体技术有限公司

Location / Headquarter: Waibstadter Str. 2-4, 74924 Neckarbischofsheim / Germany

We provide

- **state-of-the-art frequency control products for Science & Industry**
(quartz oscillators XO, TCXO, VCXO, OCXO, quartz filters, frequency synthesizer etc.)
- **Customized products and excellent service** (e.g. DRTM-LOG)

DRTM-LOG project managers:

DESY: Mavrič, Uroš

KVG: Bai, Jiaoni

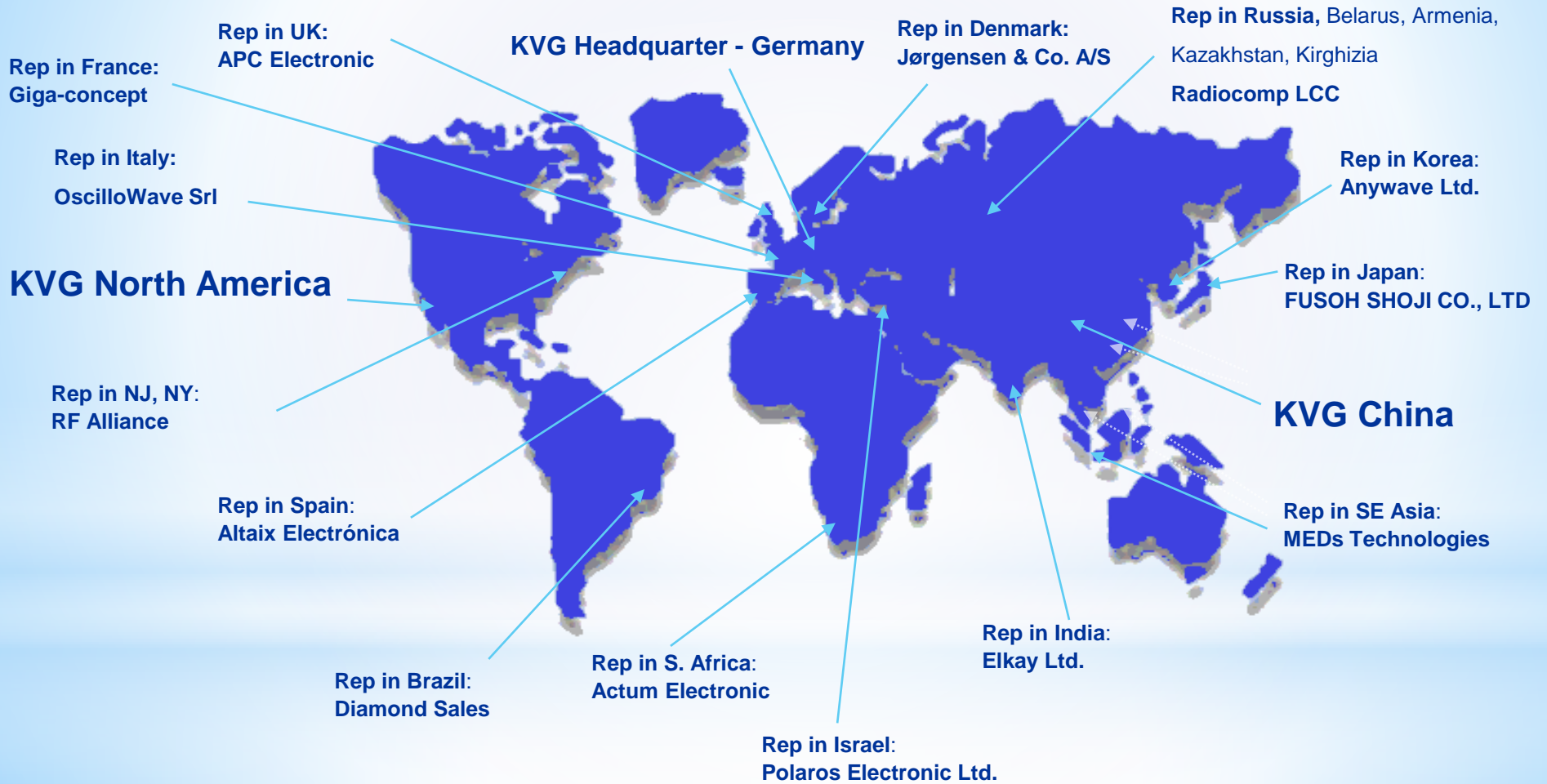


KVG - certified according to EN9100 and ISO14001





KVG Sales Offices

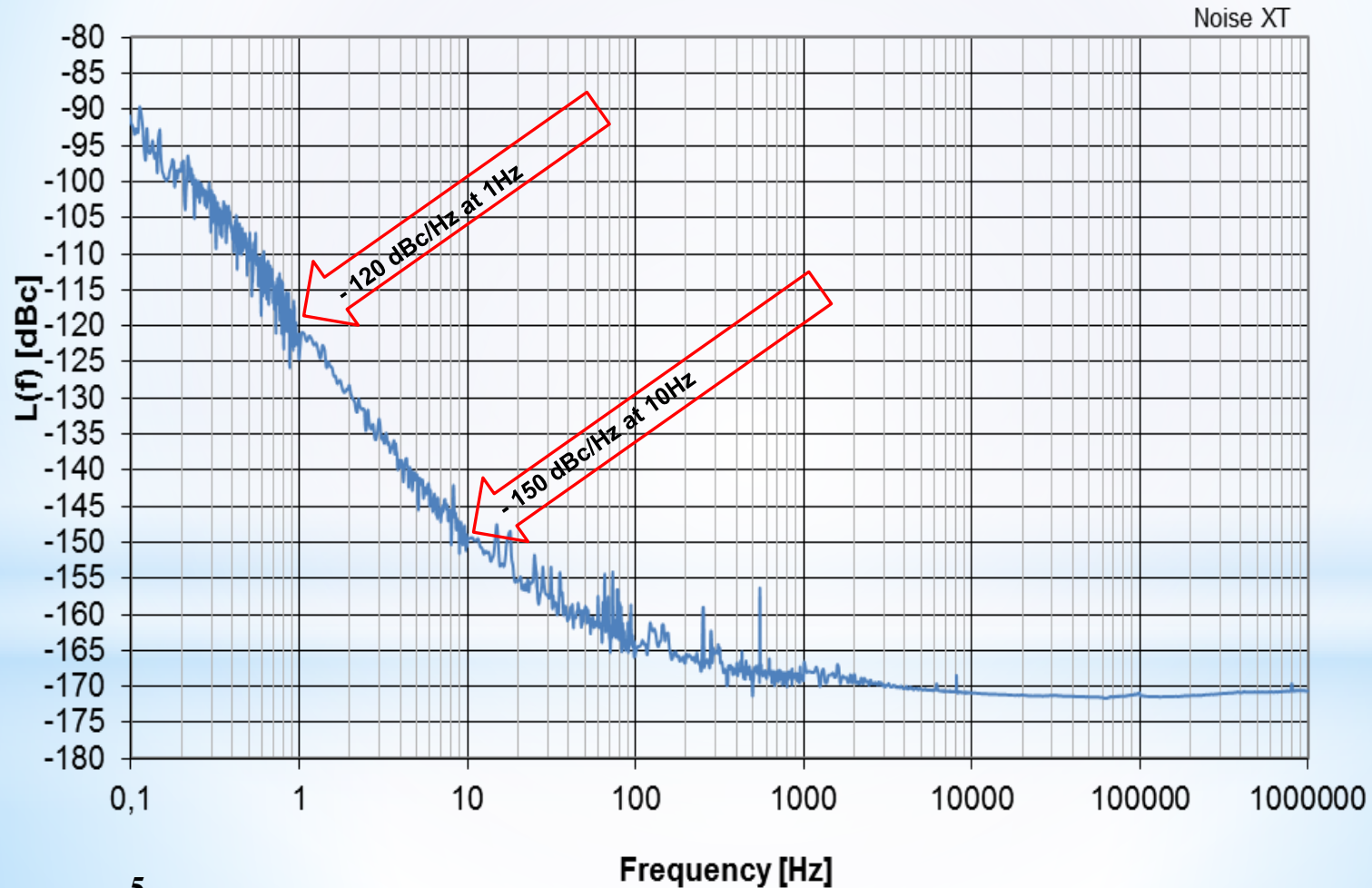


Ultra Low Phase Noise OCXO 10 MHz Series

- **25.8 x 25.8 x 14 mm Hermetic Sealed OCXO**
- **Supply Voltage :** 12.0V
- **Current Consumption :**
 - Turn On : 400 mA (4.8 W max.)
 - Steady State : 150 mA (1.8W max.)
- **Frequency Stability :**
 - ± 10ppb, -20°C ~ 70°C
- **Output power:** > +8 dBm, sine wave, 50 Ohm
- **Phase noise :**
 - < - 120 dBc/Hz at 1 Hz
 - < - 148 dBc/Hz at 10 Hz
 - < - 162 dBc/Hz at 100 Hz
 - < - 168 dBc/Hz at 1 kHz
 - < - 168 dBc/Hz at 10 kHz
 - < - 168 dBc/Hz at 100 kHz
- **Applications:**
 - Radar systems, Audio equipment, CT, Signal source Generator, Reference oscillator



Ultra Low Phase Noise OCXO 10 MHz Series



Ultra Low Phase Noise OCXO 100 MHz Series

- **Case:** 25.8 x 25.8 x 14 mm or 22 x 25 x 13.2 mm - SMD
- **Supply Voltage :** 12.0V
- **Fast Warm-up Time**
- **Low Power Consumption**
- **Frequency Stability :**
 - ± 10ppb -20°C ~ 70°C
 - ± 50 ppb -40 to +85 °C
- **Output power:** ≥ +10 dBm, sine wave, 50 Ohm
- **Phase noise :**
 - < - 110 dBc/Hz at 10 Hz
 - < - 140 dBc/Hz at 100 Hz
 - < - 170 dBc/Hz at 1 kHz
 - < - 176 dBc/Hz at 10 kHz
 - < - 177 dBc/Hz at 100 kHz
 - < - 178 dBc/Hz at 1 MHz
- **Good Long-Term Stability (Low Aging)**
15 years ±2 ppm max.
- **Applications:**
Phase noise tester, Frequency sources, Radar systems, Mobile phone Tester, Microwave systems, Signal source generator





High-End Product – ULPN 1 GHz OCXO

Ultra Low Phase Noise Frequency Synthesizer

- 162.5 MHz, 325 MHz, 499.8 MHz, 1 GHz, 1.3 GHz, 2.6 GHz, 2.856 GHz etc. with ultra low phase noise/jitter and high reliability

Example 1: ULNS-OCXO Module 1 GHz

- External 10 MHz reference clock
- Over all stability is in the range of +/-2.5 ppm including 10 years aging
- Phase noise
 - 90dBc/Hz@10 Hz
 - 120dBc/Hz@100 Hz
 - 150dBc/Hz@1 kHz
 - 160dBc/Hz@10 kHz @100 kHz @1 MHz
 - 170dBc/Hz@10 MHz
- Jitter RMS (1 kHz to 10 MHz) ≤ 3 fs

Example 2: ULNS-OCXO Module 1.3 GHz

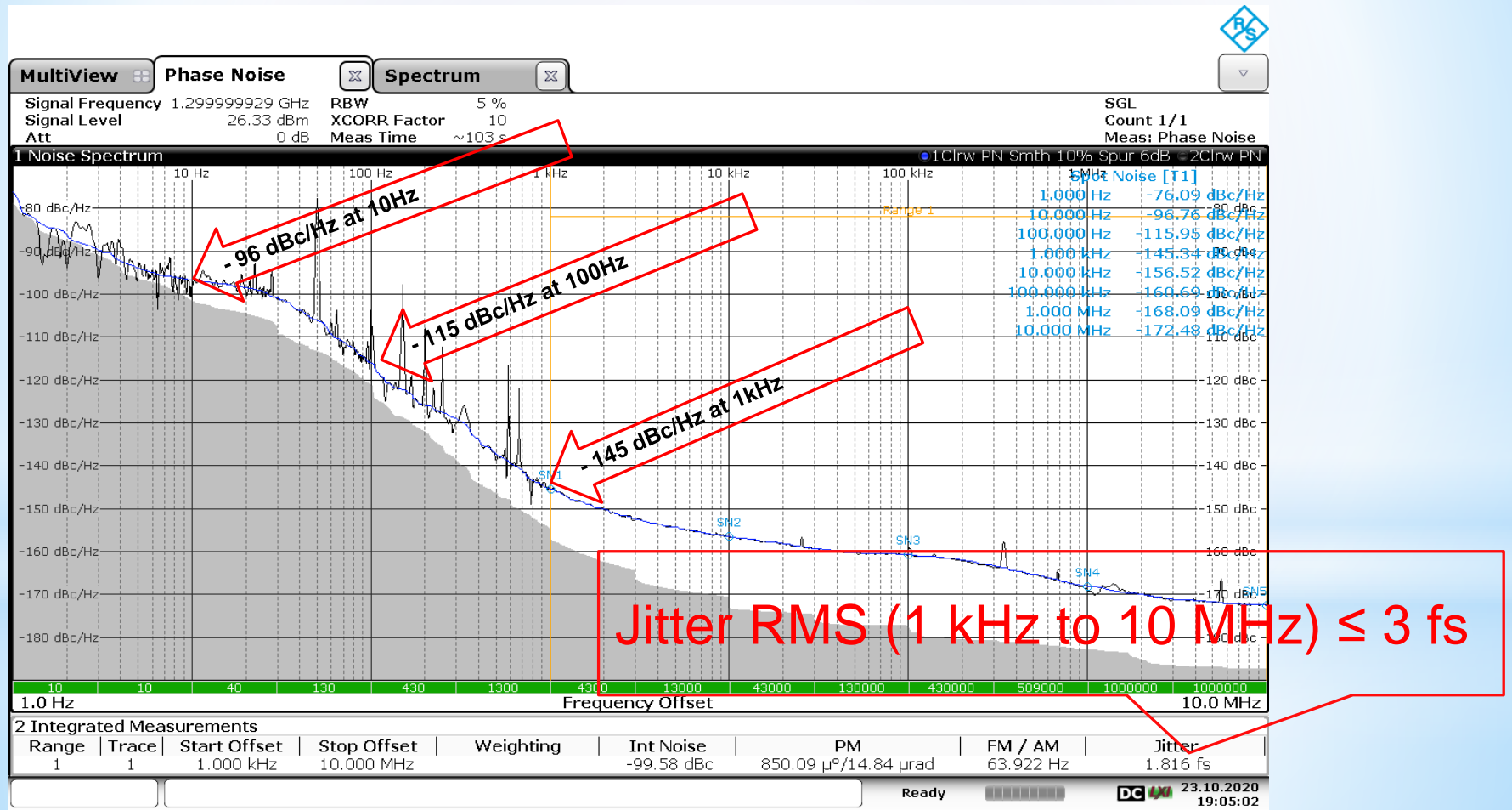
Application master oscillator of 1.3 GHz superconducting cavity

- External 10 MHz reference clock
- Phase noise
 - 90dBc/Hz @ 10 Hz
 - 115dBc/Hz @ 100 Hz
 - 142dBc/Hz @ 1 kHz
 - 154dBc/Hz @ 10 kHz
 - 159dBc/Hz @ 100 kHz
 - 170dBc/Hz @ 1 MHz
 - 170dBc/Hz @ 10 MHz
- Jitter RMS (1 kHz to 10 MHz) ≤ 3 fs

High-End Product – ULPN 1.3 GHz OCXO

Example 2: ULNS-OCXO Module 1.3 GHz

Application master oscillator of 1.3 GHz superconducting cavity



Under production

- DRTM-LOG1300 1.3 GHz - XFEL, FLASH, HZB SeaLab
- DRTM-LOG1500 1.5 GHz - HZB BESSY II

Planned production

- DRTM-LOG3000 3 GHz

You can order DRTM-LOG with your frequency application by KVG.

Thank you for your attention!

Further questions about DRTM-LOG module and KVG products,
please contact us.

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